

REMARKS

Applicants have added claims 18-27. They are supported by the specification. No new matter has been added.

Applicants acknowledge that the Examiner would allow claims 9 and 10 if rewritten in independent form including all limitations of the base claim and any intervening claims. Claim 1 has been amended to include the limitations of claim 9. Claims 2-8 and 10 are patentable for at least the same reasons as claim 1.

The Examiner rejected claims 11-17 under 35 U.S.C. 103(a) as being unpatentable over Applicant's figure 11 in view of Li et al. (US 6,473,143).

Independent claim 11 and dependent claims 12-13

Applicants submit that neither Applicant's figure 11 nor Li et al. discloses or suggests "a plurality of wavelength selecting modules positioned in sequence, one wavelength selecting module receiving the plurality of light signals, the remaining wavelength selecting modules each receiving one or more light signals that passed a previous wavelength selecting module," as recited in amended claim 11.

The Examiner concedes that "figure 11 in view of 143 lacks a plurality of wavelength separators in the optical system." Applicants' figure 11 discloses a single filter module 100 that passes a light signal having a particular center wavelength (e.g., λ_1) and reflects the remaining light signals (e.g., $\lambda_2 - \lambda_{10}$). Since only one light signal having a particular center wavelength passes the filter module 100, there would be no incentive to have "a plurality of wavelength selecting modules positioned in sequence," where "one wavelength selecting module receiv[es] a plurality of light signals," and "the remaining wavelength selecting modules each receiv[es] one or more light signals that passed a previous wavelength selecting module," as recited in amended claim 11.

Li et al. discloses a controllable bandwidth polarizer that has a narrow band polarizing reflective state and a broadband reflective state (column 5, lines 28-32). The Examiner indicated that having two states is similar to combining two cells, one being narrow and the other being broadband. However, since the polarizer in Li et al. has a broadband reflective state, this teaches

away from having a sequence of wavelength selecting modules where “the remaining wavelength selecting modules each receiving one or more light signals that passed a previous wavelength selecting module.”

For the reasons above, claim 11 would not have been obvious in view of Applicants’ figure 11 and Li et al. Claims 12 and 13 are patentable for at least the same reasons as claim 11.

Independent claim 14 and dependent claims 15-17

Applicants submit that neither Applicants’ figure 11 nor Li et al. discloses or suggests a “liquid crystal cell unit” that “includes a plurality of stacked liquid crystal cells and wherein each liquid crystal cell includes, a liquid crystal ... wherein the liquid crystal separates a light signal having an associated wavelength among the plurality of light signals” (emphasis added).

Applicants’ figure 11 discloses a multilayer filter 103 that passes a light signal having a particular center wavelength and reflects the remaining light signals. Because only one light signal having a particular center wavelength passes the multilayer filter 103, this teaches away from using “a plurality of stacked liquid crystal cells,” where each liquid crystal cell includes “a liquid crystal” that “separates a light signal having an associated wavelength among the plurality of light signals.”

Li et al. discloses a controllable bandwidth polarizer that has a narrow band polarizing ~~reflective state and a broadband reflective state. Because the polarizer in Li et al. has a~~
broadband reflective state, any polarizer that is switched to this state would reflect the light signals in a broad range of wavelength. This teaches away from using “a plurality of stacked liquid crystal cells,” where each liquid crystal cell includes “a liquid crystal” that “separates a light signal having an associated wavelength among the plurality of light signals.”

For the reasons above, claim 14 would not have been obvious in view of Applicants’ figure 11 and Li et al. Claims 15-17 are patentable for at least the same reasons as claim 14.